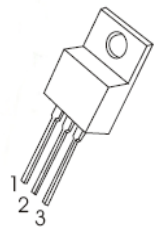
TO-220-3L Plastic-Encapsulate Voltage Regulators

CJ7805H Three-terminal positive voltage regulator

TO-220-3L



FEATURES

- **Maximum pulse output current : I_{OM}: 1.5 A**
- **Output voltage V_o: 5V**
- **Continuous total dissipation is internally limited**

ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

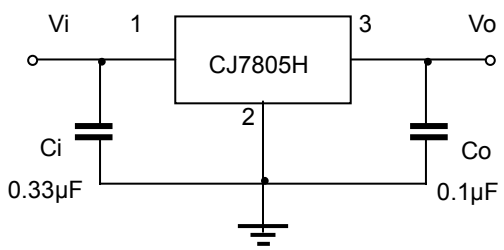
Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	83.3	℃/W
Thermal Resistance from Junction to Case	$R_{\theta JC}$	8.3	℃/W
Operating Junction Temperature Range	T_{OPR}	0~+150	℃
Storage Temperature Range	T_{STG}	-55~+150	℃

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE (Vi=10V,Io=500mA,Ci=0.33μF, Co=0.1μF, unless otherwise specified)

Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Output voltage	Vo		25℃	4.8	5.0	5.2	V
	Vo (Note1)	7V≤V_i≤20V, Io=5mA-1A, P≤15W	0-125℃	4.75	5.00	5.25	V
Load Regulation	△Vo	Io=5mA-1.5A	25℃		1.3	100	mV
		Io=250mA-750mA	25℃		0.9	50	mV
Line regulation	△Vo	7V≤V_i≤25V	25℃			100	mV
		8V≤V_i≤12V	25℃			50	mV
Quiescent Current	Iq		25℃		3.5	8	mA
Quiescent Current Change	△Iq	7V≤V_i≤25V	0-125℃		0.3	1.3	mA
		5mA≤I_O≤1A	0-125℃		0.03	0.5	mA
Output Noise Voltage	V_N	10Hz≤f≤100KHz	25℃		42		uV
Output voltage drift	△Vo/△T	I_O=5mA	0-125℃		-1.1		mV/℃
Ripple Rejection	RR	8V≤V_i≤18V,f=120Hz	0-125℃	62	73		dB
Dropout Voltage	Vd	Io=1A	25℃		2		V
Output resistance	R_O	f=1KH_Z	25℃		10		mΩ
Short Circuit Current	Isc		25℃		230		mA
Peak Current	Ipk		25℃		2.2		A

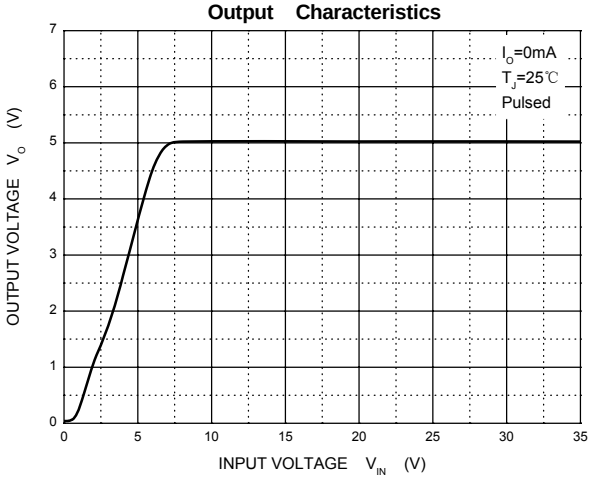
Note1:pulse test

TYPICAL APPLICATION

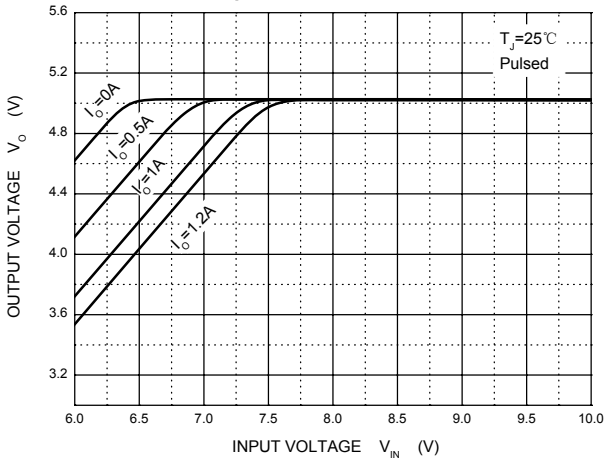


Typical Characteristics

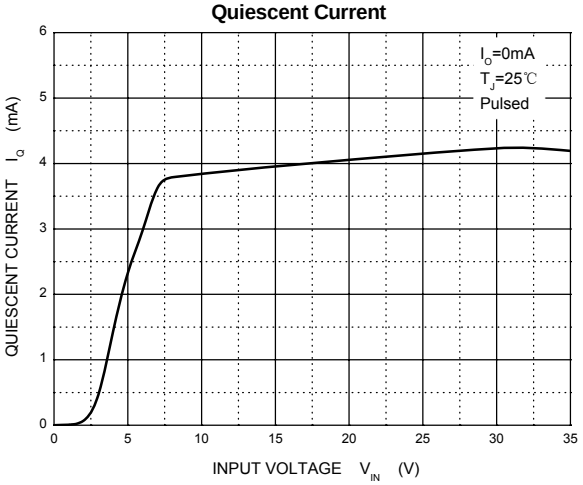
Output Characteristics



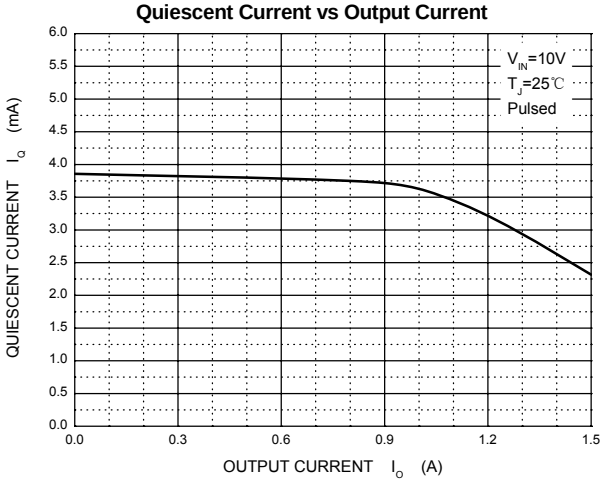
Dropout Characteristics



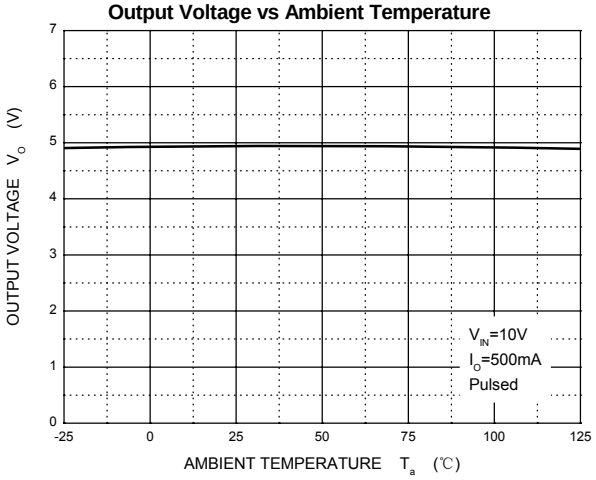
Quiescent Current



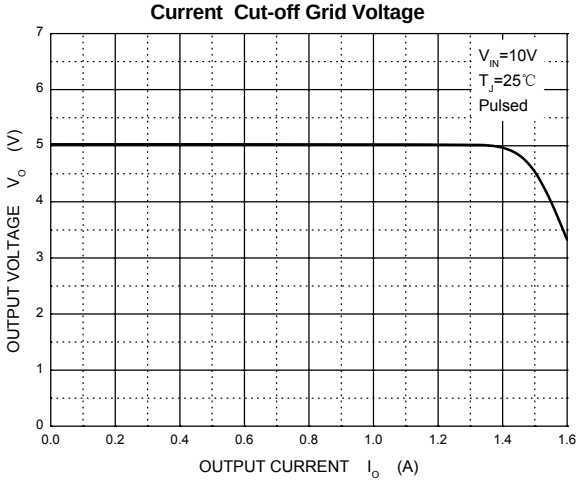
Quiescent Current vs Output Current



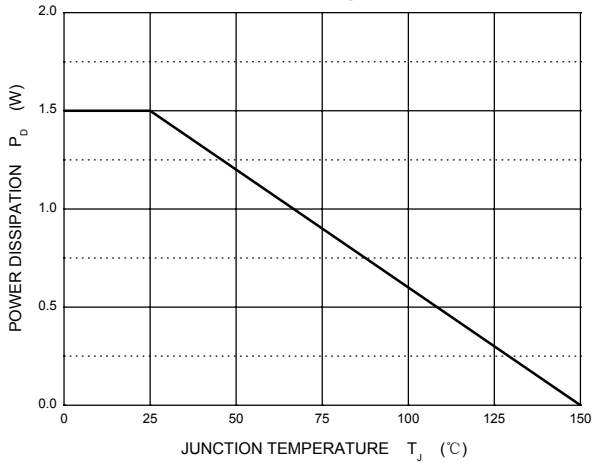
Output Voltage vs Ambient Temperature



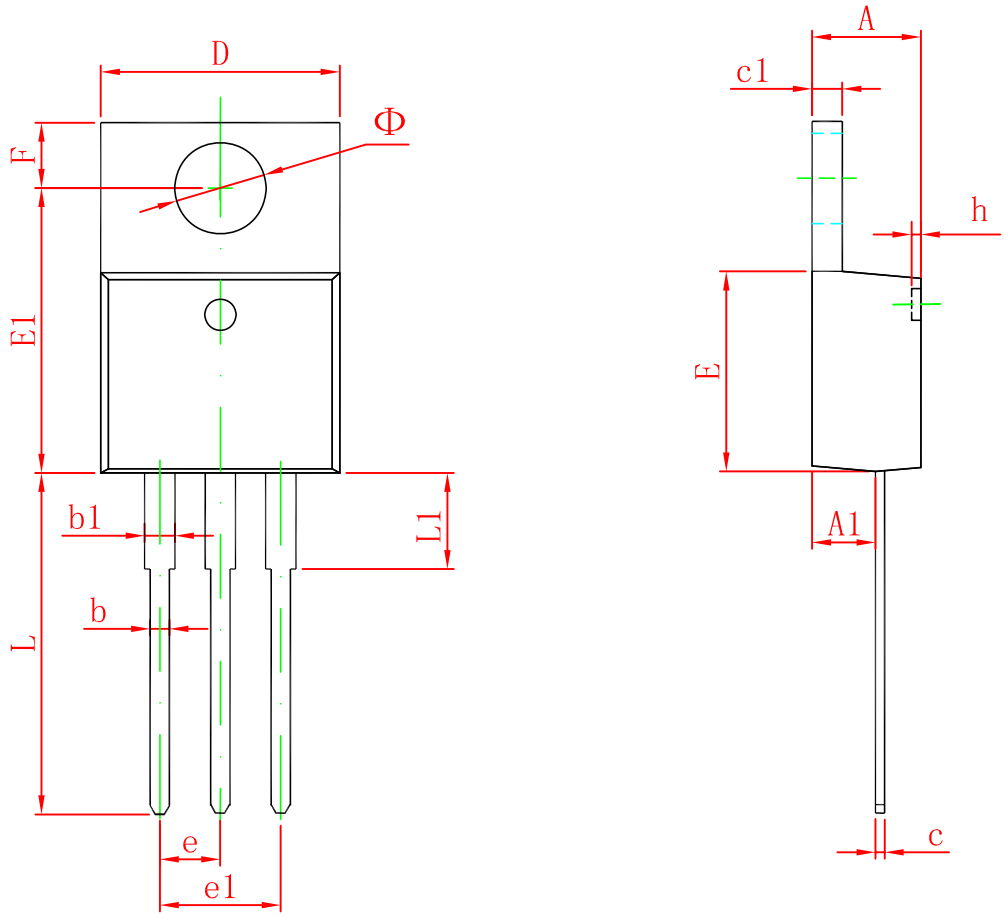
Current Cut-off Grid Voltage



Power Derating Curve



TO-220-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.470	4.670	0.176	0.184
A1	2.520	2.820	0.099	0.111
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.310	0.530	0.012	0.021
c1	1.170	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
E1	12.060	12.460	0.475	0.491
e	2.540 TYP		0.100 TYP	
e1	4.980	5.180	0.196	0.204
F	2.590	2.890	0.102	0.114
h	0.000	0.300	0.000	0.012
L	13.400	13.800	0.528	0.543
L1	3.560	3.960	0.140	0.156
Φ	3.735	3.935	0.147	0.155